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EXAMINER

ABDI, KAMBIZ

ART UNIT

PAPER NUMBER

3621

DATE MAILED: 09/29/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/593,406

Applicant(s)

ROSENAU ET AL.

Examiner

Kambiz Abdi

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 11 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-14 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-14 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

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DETAILED ACTION

1. The prior office actions mailed on earlier dates are incorporated herein by reference. In particular, the observations with respect to claim language, and response to previously presented claims and arguments.

Specification has been amended based on the informalities pointed out by the examiner.

Claim 1 has been amended.

No new claims have been added.

Claims 1-14 are pending.

Response to Arguments

1. In view of the appeals brief filed on 11 July 2003 PROSECUTION IS HEREBY REOPENED. New grounds of rejection are set forth below.

To avoid abandonment of the application, appellant must exercise one of the following two options:

(1) file a reply under 37 CFR 1.111 (if this Office action is non-final) or a reply under 37 CFR 1.113 (if this Office action is final); or,

(2) request reinstatement of the appeal.

If reinstatement of the appeal is requested, such request must be accompanied by a supplemental appeal brief, but no new amendments, affidavits (37 CFR 1.130, 1.131 or 1.132) or other evidence are permitted. See 37 CFR 1.193(b)(2).

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said

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subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

2. Claims 1 and 9-11 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,680,463 to Harald Windel and U.S. Patent No. 4,934,846 to Dennis T. Gilham in view of U.S. Patent No. 4,858,138 to Paul C. Talmadge and U.S. Patent No. 6,418,422 to Stephen Guenther.

As for claim 1 and 9, while both Windel and Gilham disclose; a franking system and method comprising;

a security module containing a first program memory in which a first program is stored and a security module data processing unit connected to said first program memory and being programmed by said first program to calculate a multi-byte security code from existing system data and to be able to receive new system data to modify said existing system data (See Gilham col. 1, ln. 47-68, col. 2, ln. 1-60, and Windel figure 1 and 10 and 10, col. 9, ln. 4-46);

said security module data processing unit being further programmed by said first program to, immediately upon receipt of said new system data, validate said new system data and determine whether said new system data are required for said security code and, if so, to immediately begin recalculating said security code in a first routine and, in a second routine, to finish recalculating said security code for at least one security imprint, thereby producing a recalculated security code, and to initiate an accounting operation for said monetary value and to communicate the recalculated security code to said separate data processing unit (See Gilham col. 1, ln. 47-68, col. 2, ln. 1-60, col. 4, ln. 1-33, and Windel figure 1 and 10, col. 9, ln. 4-46);

What Windel and Gilham do not explicitly discuss is the separate data processing unit for processing the franking imprint at the printing module. Both Windel and Gilham disclose the claimed invention, as discussed above, except for the step of second data processing at the print control module. However, Talmadge clearly teaches the step of a separate data processing unit disposed externally of said security module, said separate data processing unit being programmed to edit print data to compile a print image that contains said security code as a security imprint (See Talmadge figures 1 and 5 and associated text, col. 2, ln. 62-68, col. 3, ln. 1-32, col. 5, ln. 5-14, and col. 8, ln. 21-31). In addition,

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Guenther clearly discloses a secondary data processing external of the security module (Such as an smart card) carrying a value for franking a postal meter imprint (See Guenther figure 1a, 2, 4, and 5a). Therefore, it would have been obvious to one having ordinary skill in the art at the time the current invention was made to combine the above teachings to achieve a better authorization procedure and more reliable validation system for the postal franking systems which would take less time to process by division of task between the two processors, which this division of task is a well known practice in calculation intensive algorithm that need fast results.

As for claim 10, Windel, Gilham, in view of Talmadge and Guenther disclose, all the limitations of claim 9, further;

Windel, Gilham, Talmadge, and Guenther disclose the claimed invention, as discussed above, except for the step of, calculating a data authorization code in said security module data processing unit as said security code dependent on said ascending register value and additional data in said new system data and generating said security imprint at a time following an end of entry of said new system data and before conducting an accounting for said monetary value. Therefore, It would have been an obvious matter of design choice to modify the teachings of Windel, Gilham, and Guenther, to provide the step of, using an ascending register in order to calculate an authorization code, since applicant has not disclosed that using ascending register solves any stated problem in a new or unexpected way or is for any particular purpose which is unobvious to one of ordinary skill and it appears that the claimed feature does not distinguish the invention over similar features in the prior art since, the teachings of Windel, Gilham, and Guenther will perform the invention as claimed by the applicant with any method, means, or product to use the ascending register as a variable for generating security code.

As for claim 11, Windel, Gilham, in view of Talmadge and Guenther disclose, all the limitations of claim 9, further;

Windel, Gilham, Talmadge, and Guenther disclose the claimed invention, as discussed above, except for the step of, using a plurality of mail items all having the same monetary value for franking or

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different authorization code based on plurality of variable numbers such as ascending or descending registers or change in the time or date or the article number. Wherein said new system data are associated with an inserted mail item and wherein said security code is a data authorization code and wherein said security module data processing unit calculates said data authorization code dependent on said ascending register value and additional data in said new system data at a time from said insertion of said mail item and before conducting an accounting for said monetary value. However, Gilham clearly discloses the steps mentioned above for generating an authorization code for postal franking. (See Gilham col. 4, ln. 1-34). Therefore, it would have been obvious to one having ordinary skill in the art at the time the current invention was made to combine the above teachings to achieve a more reliable and efficient processing system and method for tracking and securing the postal franking systems. In addition, it would speed up the printing process by pre-processing some calculations based on none variable data needed to calculate the authorization code for printing by the postal franking system.

3. Claims 2-5 and 12-13 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,680,463 to Harald Windel, U.S. Patent No. 4,934,846 to Dennis T. Gilham, U.S. Patent No. 4,858,138 to Paul C. Talmadge, and U.S. Patent No. 6,418,422 to Stephen Guenther, as applied to claim 1 above and further in view U.S. Patent No. 4,649,266 to Alton B. Eckert.

As for claim 2, Windel, Gilham, in view of Talmadge and Guenther disclose, all the limitations of claim 1, further;

What Windel does not explicitly teach is that a security code is a data authorization code and wherein said security module data processing unit contains an internal non-volatile memory in which at least one key for calculating said data authorization code is protectively stored against access and wherein said security module contains a further security module data processing unit for performing said accounting. However, both Gilham and Eckert clearly teaches the method of creating a security code to be imprinted on the mail item and keeping an accounting of the available fund to the franking system by

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means of a data processing module. (See Gilham col. 3, ln. 57-68 and col. 4, ln. 1-33 and Eckert figures 1 and 2, and col. 1, ln. 66-68 and col. 2, ln. 1-36). Therefore, it would have been obvious to one having ordinary skill in the art at the time the current invention was made to combine the above teachings to achieve a more reliable and efficient processing system and method for tracking and securing the postal franking systems.

As for claim 3, Windel, Gilham, and Guenther, and Eckert disclose, all the limitations of claim 2, further;

wherein said security module data processing unit is a processor programmed by said first program to calculate a first eight bytes of said data authorization code in advance in said first routine each day, and wherein said further security module data processing unit is a hardware accounting unit which produces an accounting result as a result of said accounting in said second routine, and wherein said security module further contains a non-volatile memory, accessible by said hardware accounting unit, in which said hardware accounting unit stores said accounting result (See Gilham col. 4, ln. 1-34). However, it would have been obvious to one having ordinary skill in the art at the time the current invention was made to combine both teachings to expedite and create a more secure and better authorization code to be printed by a franking system.

As for claim 4, Windel, Gilham, and Guenther, and Eckert disclose, all the limitations of claim 3, further;

Windel and Gilham disclose the claimed invention, as discussed above, except for the step of, a processor is programmed by said first program to determine an ascending register value, dependent on said monetary value, for at least one mail item, and to finish calculating said data authorization code in said second routine for said at least one mail item using said ascending register value. Therefore, It would have been an obvious matter of design choice to modify the teachings of Windel and Gilham, to provide the step of, using an ascending register since applicant has not disclosed that using ascending register solves any stated problem in a new or unexpected way or is for any particular purpose which is unobvious to one of ordinary skill and it appears that the claimed feature does not distinguish the invention over similar features in the prior art since, the teachings of Windel and Gilham will perform the

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invention as claimed by the applicant with any method, means, or product to use the ascending register as a variable for generating security code.

As for claim 5, Windel, Gilham, Guenther, and Eckert disclose, all the limitations of claim 3, further;

Windel and Gilham disclose the claimed invention, as discussed above, but Gilham clearly discloses the step of, using a plurality of mail items all having the same monetary value for franking or different authorization code based on plurality of variable numbers such as ascending or descending registers or change in the time or date or the article number. Wherein said processor is programmed by said first program to pre-calculate a next-successive data authorization code for a next mail item after debiting said monetary value for a preceding mail item (See Gilham col. 4, ln. 1-34). However, it would have been obvious to one having ordinary skill in the art at the time the current invention was made to combine both teachings to speed up overall processing of information such as calculation of an authorization code to be printed by a franking system.

As for claim 12, Windel, Gilham, in view of Talmadge and Guenther disclose, all the limitations of claim 9, further;

Windel, Gilham, Talmadge, and Guenther teach how and authorization code can be calculated and there is certain pre-calculations that do take place in their system. But, what they are not explicit is said security code is a data authorization code and wherein said security module data processing unit calculates said data authorization code dependent on a machine identifier, said monetary value and a current date, and wherein at least said machine identifier is included in a pre-calculation of n bytes of said data authorization code. However, Eckert is clearly discloses the steps and process to obtain a authorization code base on the elements that have been mention above and certain pre-calculations that has been mentioned (See Eckert figures 1,2, and 3). Therefore, it would have been obvious to one having ordinary skill in the art at the time the current invention was made to combine the above teachings to achieve further strength in the cryptography of the validation code to be printed by the postal franking systems in addition to speed up overall processing of information such as calculation of an

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authorization code to be printed by a franking system. Preprocessing of certain calculations for speeding up further processing in a system is well known in the art.

As for claim 13, Windel, Gilham, in view of Talmadge and Guenther disclose, all the limitations of claim 9, further;

Windel, Gilham, Talmadge, and Guenther teach how and authorization code can be calculated and there is certain pre-calculations that do take place in their system. But, what they are not explicit is said security code is a data authorization code and wherein said security module data processing unit calculates said data authorization code dependent on a machine identifier, said monetary value and a current date, and wherein at least said machine identifier and said date is included in a pre-calculation of n bytes of said data authorization code. However, Eckert clearly teaches a security module capable of creating an authorization code for postal franking that does pre-calculations of data before the next variable has arrived (See Eckert figures 1,2, and 3, and col. 2, ln. 1-68). Therefore, it would have been obvious to one having ordinary skill in the art at the time the current invention was made to combine the above teachings to achieve further strength in the cryptography of the validation code to be printed by the postal franking systems in addition to speed up overall processing of information such as calculation of an authorization code to be printed by a franking system. Preprocessing of certain calculations for speeding up further processing in a system is well known in the art.

As for claim 14, Windel, Gilham, in view of Talmadge and Guenther disclose, all the limitations of claim 9, further;

Windel, Gilham, Talmadge, and Guenther teach how and authorization code can be calculated and there is certain pre-calculations that do take place in their system. But, what they are not explicit is comprising successively supplying sets of new system data to said security module data processing unit and after communicating said security code to said separate data processing unit, in said security module data processing unit beginning calculation of a next-successive security code for next new system data, at least dependent on said ascending register value to produce pre-calculated n bytes of

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said next-successive security code. However, Eckert clearly teaches a security module capable of creating an authorization code for postal franking that does pre-calculations of data before the next variable has arrived (See Eckert figures 1,2, and 3, and col. 2, ln. 1-68). Therefore, it would have been obvious to one having ordinary skill in the art at the time the current invention was made to combine the above teachings to achieve further strength in the cryptography of the validation code in addition to speed up overall processing of information, such as calculation of an authorization code to be printed by a franking system. Preprocessing of certain calculations for speeding up further processing in a system is well known in the art.

4. Claim 6 is rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,680,463 to Harald Windel, U.S. Patent No. 4,934,846 to Dennis T. Gilham, U.S. Patent No. 6,418,422 to Stephen Guenther, and U.S. Patent No. 4,649,266 to Alton B. Eckert, as applied to claim 3 above and further in view U.S. Patent No. 5,671,146 to Harald Windel.

As for claim 6, Windel, Gilham, Guenther, and Eckert disclose, all the limitations of claim 3, further;

Windel, Gilham, Guenther, and Eckert disclose the claimed invention, as discussed above, except for the step of, internal non-volatile memory, which is an SRAM of said processor, and wherein said security module further comprises a battery supporting said SRAM, and wherein said SRAM had memory areas for protected storage of at least some data produced by said pre-calculation, and wherein said at least one key for calculating said data authorization code is protectively stored in a memory area of said SRAM.

Computer systems typically use magnetic disk drives for mass storage of data. However, disk drives are disadvantageous in that they are bulky and in their requirement for high precision moving mechanical parts. Consequently they are not rugged and are prone to reliability problems, as well as consuming significant amounts of power. Solid-state memory devices such as DRAM's and SRAM's do not suffer from these disadvantages. However, they are much more expensive, and require constant power to maintain their memory (volatile). Consequently, they are typically used as temporary storage.

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Cache memory is generally used to speed up the performance of systems having slower access devices. For example in a computer system, access of data from disk storage is slow and the speed would be greatly improved if the data could be obtained from the much faster RAM. Typically a part of system RAM is used as a cache for temporarily holding the most recently accessed data from disk. The next time the data is needed, it may be obtained from the fast cache instead of the slow disk. The scheme works well in situations where the same data is repeatedly operated on. This is the case in most structures and programs since the computer tends to work within a small area of memory at a time in running a program. Another example of caching is the using of faster SRAM cache to speed up access of data normally stored in cheaper but slower DRAM or any other none volatile memory devices. In addition is has been used in the art for security reasons and tamper proofing remote systems that need to be securely placed and prevented from being accessed by unauthorized persons (See Windel (5,671,146) figures 1b, 1c, and 2A and col. 11, ln. 9-52). Therefore, it would have been obvious to one having ordinary skill in the art at the time the current invention was made to combine the above teachings to achieve a faster, more reliable and more efficient processing system for the postal franking systems to access data stored in the memory and at the same time more secure housing for the franking device to be tampered with.

5. Claims 7-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over U.S. Patent No. 5,680,463 to Harald Windel, U.S. Patent No. 4,934,846 to Dennis T. Gilham, U.S. Patent No. 6,418,422 to Stephen Guenther, U.S. Patent No. 4,649,266 to Alton B. Eckert, and U.S. Patent No. 5,671,146 to Harald Windel as applied to claim 6 above and further in view U.S. Patent No. 6,058,193 to Robert A. Cordery.

As for claim 7, Windel, Gilham, Guenther, and Eckert disclose, all the limitations of claim 6, further;

What Windel, Gilham, Guenther, and Eckert are not specific and explicit about is a processor is programmed by said first program to calculate said data authorization code using a machine identifier and OCR key indicator, a date, said monetary value, and a register value for an ascending register.

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However, Cordery clearly discloses using OCR recognizable characters and the usefulness of OCR Key indicators (or error correction code) (See Cordery figures 6 and 7 and col. 9, ln.43-47) for additional indicium's for generating a validation markings or authorization code. Therefore, it would have been obvious to one having ordinary skill in the art at the time the current invention was made to combine the above teachings to achieve a more sophisticated and secure validation code for the postal franking systems to be printed on postage mail.

As for claim 8, Windel, Gilham, and Eckert disclose, all the limitations of claim 2, further;

What Windel, Gilham, Guenther, and Eckert are not specific and explicit about is a processor programmed by said first memory to calculate said data authorization code using an algorithm selected from the group consisting of DES algorithms and triplet DES algorithms. However, Cordery clearly teaches the application of "triple DES" algorithm (See Cordery figure 3, col. 8, ln. 14-20 and ln. 50-65). Therefore, it would have been obvious to one having ordinary skill in the art at the time the current invention was made to combine the above teachings to achieve further strength in the cryptography of the validation code to be printed by the postal franking systems to be printed on postage mail.

Conclusion

2. Examiner has pointed out particular references contained in the prior arts of record in the body of the previous office action for the convenience of the applicant. Although the specified citations are representative of the teachings in the art and are applied to the specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant, in preparing the response, to consider fully the entire references as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior arts or disclosed by the examiner.

3. **THIS ACTION IS MADE FINAL.** See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

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A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kambiz Abdi whose telephone number is (703) 305-3364. The examiner can normally be reached on 9:30 AM to 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, James P. Trammell can be reached on (703) 305-9768.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the Receptionist whose telephone number is (703) 308-1113.

Any response to this action should be mailed to:

**Commissioner of Patents and Trademarks
Washington D.C. 20231**

or faxed to:

(703) 305-7687 [Official communications; including After Final communications labeled "Box AF"]

(703) 746-7749 [Informal/Draft communications, labeled "PROPOSED" or "DRAFT"]

Hand delivered responses should be brought to:

**Crystal Park 5, 2451 Crystal Drive
7th floor receptionist, Arlington, VA, 22202**

Abdi/K
September 24, 2003


**JAMES P. TRAMMELL
SUPERVISORY PATENT EXAMINER
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